

TOW Accuracy Training

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Antiarmor training is greatly misunderstood in light infantry units. The TOW missile systems that are available are often underutilized, and the training of the soldiers who man those systems does not always keep pace with the doctrine coming out of the Infantry School.

The 2d Battalion, 27th Infantry, 7th Infantry Division, was tasked to take part in a 1989 TOW accuracy study at the National Training Center (NTC) in California. In preparation for this test event, the battalion developed a training plan that other units may find helpful. Although the program I outline below focuses on light antitank platoons, motorized or heavy units that have antiarmor or Bradley companies and want to concentrate on their TOW accuracy may find it of some value.

The study, directed by the Department of the Army, would test the gunners' accuracy in firing the TOW systems mounted on the improved TOW vehicle (ITV), the Bradley fighting vehicle, and the HMMWV (high mobility multi-purpose wheeled vehicle). The tests would be fired under simulated combat conditions that would include artillery, smoke, and timed engagements and put stress on the gunner. The crews would fire real missiles (with the high explosive antitank, or HEAT, warheads removed) at pop-up targets.

There were several reasons for this test. The major reason was that in TOW accuracy tests at their home stations, TOW gunners were scoring 90 percent accuracy using the M-70 trainer device (tracking board), while at the NTC they were scoring only 15 percent accuracy

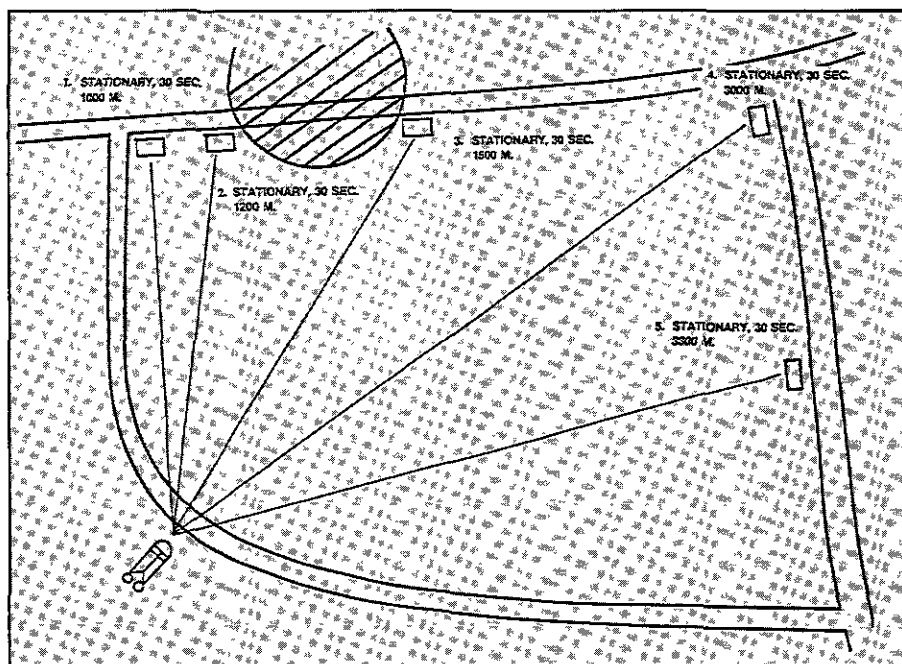
using MILES equipment.

This noticeable difference could be attributed to many factors, but the success or failure of a TOW unit at the NTC could be partially explained by simulated combat conditions—artillery, CS (tear gas), smoke, heat, and dust while engaging moving targets—that were present during NTC operations.

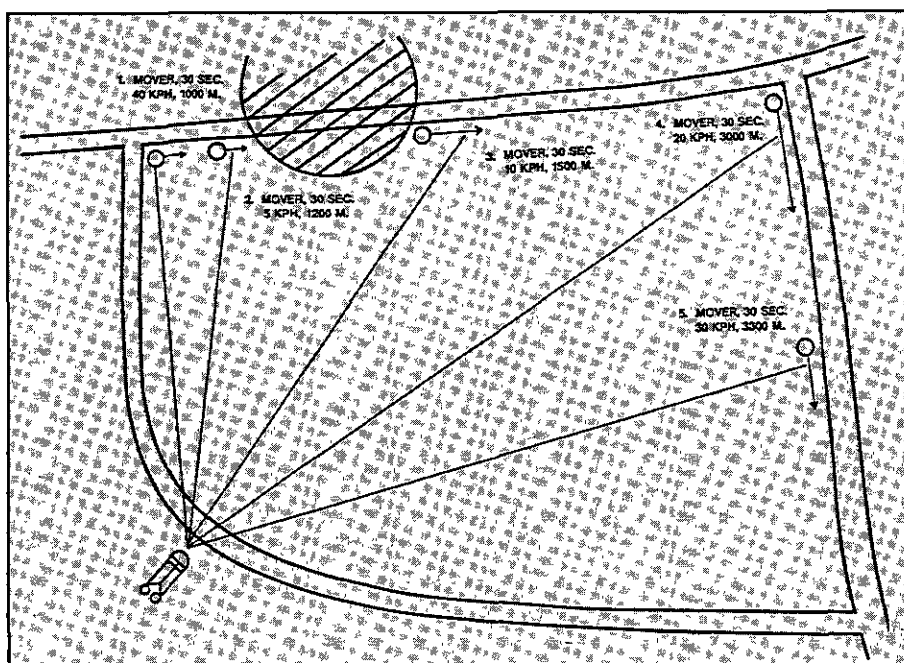
Light antitank platoons are particularly vulnerable because they use the M996 HMMWV with the M-220 TOW system mounted on top. This leaves the gunner and the system exposed to all battlefield conditions, the worst of which are artillery and gas. (There is nothing a TOW gunner hates more than trying to track a target at 2,000 meters while also trying to fit his protective

mask against the eyepiece of the day or night sight.) In addition, the HMMWV platform offers little stability to help the gunner keep the sight crosshairs on his target during a missile's flight.

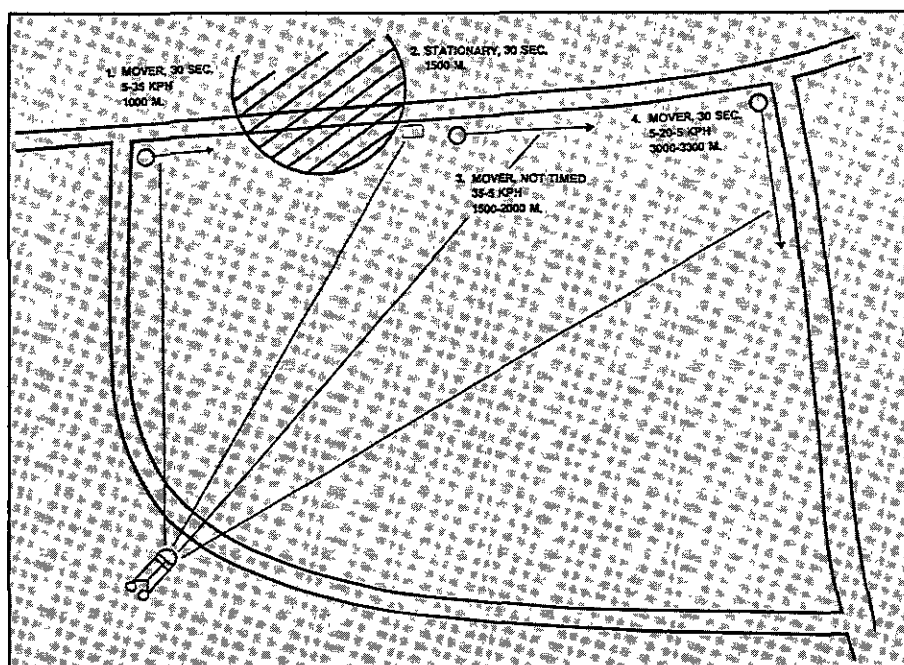
The training plan the battalion developed used MILES under combat conditions against uncooperative targets at maximum ranges of 3,750 meters. (See accompanying diagrams.) It was based on the Infantry School's TOW gunnery tables dated 5 April 1988. These six tables provide a framework for TOW trainers to use to improve the accuracy of their sections and platoons. Table 1 uses the M-70 trainer; Tables 2-5 use MILES; and Table 6 is the advanced qualification table, which will



TOW TABLE II: Part A — Five stationary engagements. This is a six-shot table of stationary target engagements at various ranges.



TOW TABLE II: Part B — Five moving engagements. This is a six-shot table that uses a moving target at various ranges.



TOW TABLE III: Three moving engagements, one stationary engagement. This is a four-shot table that combines stationary and moving targets at various speeds and distances out to 3,750 meters.

use the precision gunnery training system (PGTS) when it is fielded.

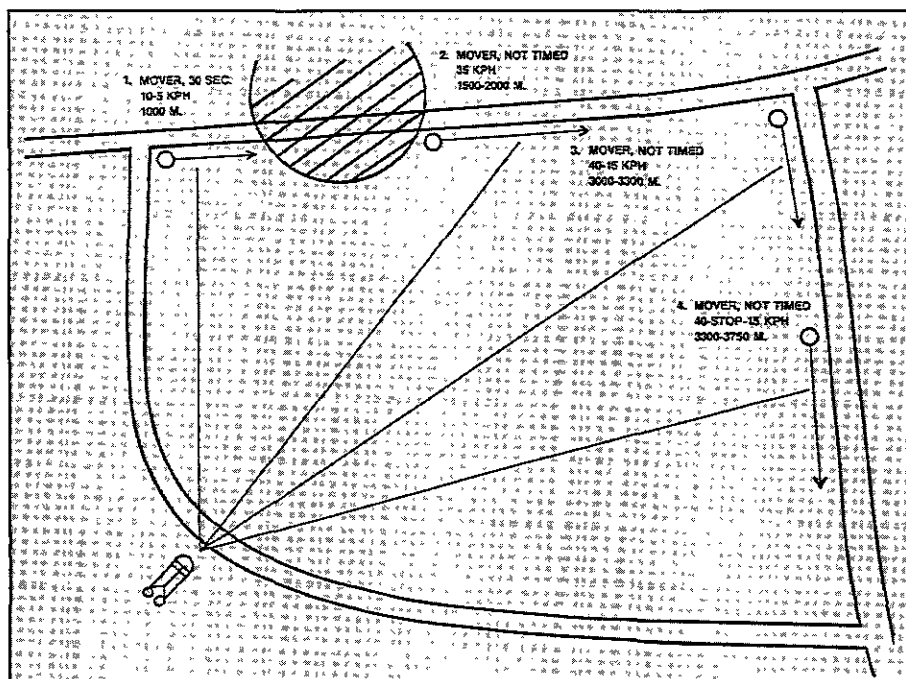
In our battalion's training program, combat conditions were introduced into the accuracy training tables with artillery simulators, CS, and smoke. The squads reloaded missiles and used fire commands in conducting all of the MILES tables. Each squad loaded six MILES missile simulation rounds, each with an ATWESS (antitank weapon effect signature simulator) cartridge, into the missile storage racks and

prepared to track a HMMWV that was being used as the target vehicle.

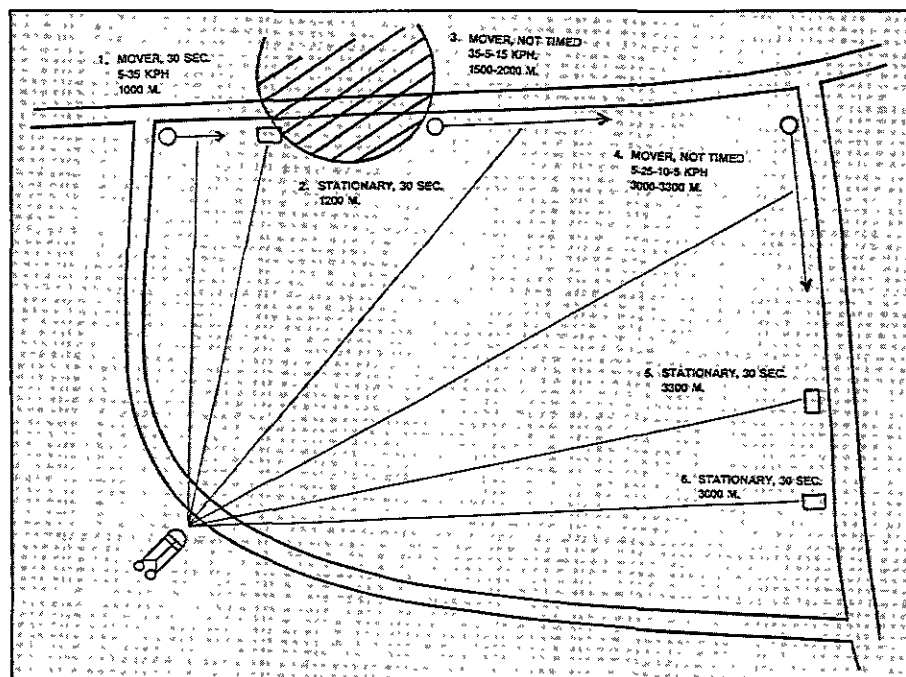
The target HMMWV was down range and began to move at the various speeds and distances the table required. A gunner engaged the vehicle without knowing when artillery or gas might be introduced into the scenario. In the preliminary tables, a gunner had to score 80 percent or more to advance to the next table. During Table 5, two to four artillery simulators and one CS or smoke grenade were used near his

position to duplicate enemy indirect fire. (The smoke must be placed where it will obscure while still being diffused enough to allow the MILES lasers to penetrate it.)

Although all of the MILES tables in this training program could be fired at moving silhouette or scaled targets, the advantage of shooting at a moving target vehicle at realistic distances was that the target could be uncooperative. It could head for the system's deadspace, and its movements could be controlled



TOW TABLE IV: Four moving engagements. This is a six-shot engagement that focuses on uncooperative moving targets at speeds of 5 to 45 KM/H; they accelerate and decelerate moving out to the maximum engageable distance.



TOW TABLE V: Three moving engagements; three stationary engagements. This is a six-shot standard qualification table using MILES. It combines all elements of the previous tables.

by radio to offer a target that accelerated and decelerated. The movement also stirred up dust, a natural obscurant, and this made it difficult for the gunner to track the vehicle at actual ranges.

The goal of this training was to achieve realism, because training in a sterile environment has little value. The

execution of the accuracy tables leading up to qualification on Table 5, combined with combat replication, proved to be a good training technique. It gave trainers an excellent assessment of how well the gunners and squads could perform under the stressful conditions they could expect to face in combat.

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